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Grasses and Grains

1938 For Fall Sowing



Hay and Permanent Pasture - See Page 2

PETER HENDERSON & CO.
35 CORTLANDT ST. . . NEW YORK, N. Y.

Henderson's Grasses and Grains

FOR FALL SOWING

This Catalogue Cancels All Previous Quotations

**We Prepay Transportation Charges on Grass Seeds, Purchaser Pays
Charges on Other Farm Seeds**

Remittances—Remittances may be made either in the form of a P. O. Money Order, Express Money Order, Bank Draft, Express Purchasing Order, or Registered Letter.

Accounts—Charge accounts invited. Kindly furnish reference. New York City reference preferred.

We Make No Charge for Packing, boxes, cases, or barrels. Cloth bags we charge for, viz.: 1 peck, 10c.; $\frac{1}{2}$ bushel, 15c.; 1 bushel, 20c.; 2 bushels, 30c. Burlap bags, 1 peck, 7c.; $\frac{1}{2}$ bushel, 10c.; 1 bushel, 12c.; 2 bushels, 15c.; 4 bushels, 20c.; 6 bushels, 30c.; 8 bushels, 35c.

Farm Managers—We have always on hand applications by competent men for positions as farm and

estate managers, men who have been trained in the business and are well posted on agriculture generally, also the raising and care of live stock. We will be very pleased to enter into correspondence with those who require the services of such. We make no charge for this service, either to employer or employee.

All Gardeners of Experience know that success depends largely on weather conditions and proper cultivation, so in accordance with the universal custom of the seed trade PETER HENDERSON & CO., gives no warranty, express or implied, as to description, quality, productiveness, or any other matter, of any Seeds, Bulbs, Roots or Plants they send out, and they will not be in any way responsible for the crop.

HENDERSON'S SPECIAL GRASS SEED MIXTURE FOR Hay and Permanent Pasture

(See illustration on Front Cover)

**Produces Wonderful Hay Crops and Pasture, Maintaining
Its Cropping Qualities Twenty Years or More**

It has been fully demonstrated by the careful trials considered by the Agricultural Experiment Stations in various parts of the country that good pasturage, and good hay crops can be best secured by sowing Grass seeds in mixtures. Pastures seeded naturally are always found to contain many varieties of Grasses growing and flourishing side by side without detriment to each other, and attaining their maximum of growth at different periods of the year. It is to this notable characteristic that such pastures furnish continually an abundant bite, when meadows and pastures composed of but a few varieties are brown and bare.

Another great advantage in sowing Grass seed mixtures is that full use is made of the land. The various Grasses being of different habit, seek the food they require at unequal depths in the soil, some being shallow-rooted in habit and some deep-rooted; thus every strata of soil is utilized, and a far greater number of plants grow and flourish in a given space.

Henderson's Special Grass Seed Mixture for Hay and Permanent Pasture is a well-balanced combination of a number of native and acclimated foreign Grasses and Clovers, blended and improved upon during exhaustive trials under widely varied conditions, soils and localities for several years, until practically perfect, our aim being to produce, under the extremes of the American climate of heat, drought and cold, a Permanent dense and deep-rooting turf that would yield year after year the maximum quantity of forage. These Grasses are of superior quality, inviting, sweet and nourishing, whether used as hay or pasture. That we have been successful is attested by the numerous letters of praise for these special Grass Mixtures that we have received from the users, and the tributes to their merits published in many of the agricultural journals.

In preparing these Mixtures the greatest care is exercised in selecting such varieties as are suited to the soil to be sown and are likely to realize the object in view. Therefore a description of the soil, whether Light, Medium or Heavy and climate, and if with or without a grain crop, should accompany each order. Sow 40 lbs. per acre. Full directions for sowing enclosed in every bag.

Price, lb. 50c.; 10 lbs. \$4.00; 25 lbs. \$8.75; 100 lbs. \$30.00; transportation paid.

PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Henderson's Special Grass Mixtures

PERMANENT HAY Special Grass Seed Mixture Supplies a Good Crop of Hay in Dry Seasons

Although the most widely cultivated Hay Grass in the United States is Timothy, or a mixture of Timothy and Clover, and while they answer the purposes admirably on farms where the soil is suitable and where the usual three and four years' rotation is carried on, yet there are many other Grasses which will yield more profitable returns.

An acre of Henderson's Special Grass Mixture for Permanent Hay will yield double the quantity of an acre of Timothy and Clover, and the farmer whose land is sown with a proper mixture of Permanent Grasses, requiring only an occasional top-dressing of manure or fertilizer to maintain heavy cropping qualities for twenty years or more, avoids the expense of the yearly plowing, and cultivating necessary in rotation cropping. Sow 40 lbs. per acre.

Price, lb. 50c.; 10 lbs. \$4.00; 25 lbs. \$8.75; 100 lbs. \$30.00; transportation paid.

PERMANENT PASTURE Special Grass Seed Mixture

There is no more important part of a farm than a good pasture, and that can only be obtained by the use of the proper Grasses, varieties that have different root formations and different habits and season of growth, in order to maintain a rich, close turf throughout the entire season. Timothy should never be used for pasture because it will *not* stand trampling, and soon runs out when heavily pastured and at best is short-lived, as compared with the permanent Grasses used in our Special Mixtures. These Mixtures contain over a dozen of the best permanent Grasses, both American-grown and imported. All are permanent, and when once established will last indefinitely, if the fertility of the soil is kept up by occasional top-dressing. Sow 40 lbs. per acre.

Price, lb. 50c.; 10 lbs. \$4.00; 25 lbs. \$8.75; 100 lbs. \$30.00; transportation paid.

WOODLAND PASTURES Special Grass Seed Mixture

Is composed of a selection of Grasses which will thrive under trees. Orchard Grass is one of the best Grasses for the purpose, but this mixture is much superior as it will make a closer and more even pasture than Orchard Grass alone. Sow 40 lbs. per acre.

Price, lb. 60c.; 10 lbs. \$5.50; 25 lbs. \$11.00; 100 lbs. \$40.00; transportation paid.

RENOVATING MIXTURE For Impoverished Grass Lands

Sow the grass seed at rate of 40 lbs. to an acre.

Price, lb. 50c.; 10 lbs. \$4.00; 25 lbs. \$8.75; 100 lbs. \$30.00; transportation paid.

MIXED PERMANENT CLOVER

On account of their greater weight, should be sown separately, but at the same time as the Grasses. This Mixed Clover comprises White Mammoth Perennial or Cow Grass, Alsike, etc. Sow 10 pounds per acre.

Price, lb. 65c.; 10 lbs. \$6.00; 25 lbs. \$13.75; 100 lbs. \$50.00.

Purchaser pays transportation charges.



HENDERSON'S PERMANENT PASTURE DEVELOPS CONTENTED CATTLE

Henderson's Superior Recleaned Grasses

For Pasture, Hay, Turf on Golf Courses, Athletic Fields, Etc., Etc.

Cleaned at the source of production, and re-cleaned in our own warehouses with the most modern seed-cleaning machinery in America. They are then analyzed and tested by us, and verified by check tests at State and Government Stations. Unequaled for Purity and Germination.

Better turf is obtained in most cases if a mixture of grass seed is sown. We will be glad to make special mixtures when desired in accordance with the purchaser's requirements or after his own formulas.

AWNLESS BROME

(*Bromus Inermis*)

Will produce heavy crops in dry sections and on poor soils when other grasses perish. It is one of the hardiest grasses and succeeds in a wide range of temperature. Price, lb. 60c.; 10 lbs. \$5.50; 25 lbs. \$12.50.

BENT, ASTORIA

(*Agrostis Capillaris*)

This variety differs from Rhode Island Bent in that it is an underground creeper, usually by rhizomes. It gives a dense, reinforced sod of a pleasing green color and a fine texture. Price, lb. \$1.25; 10 lbs. \$12.00; 25 lbs. \$25.00; 100 lbs. \$95.00.

BENT, COLONIAL

(*Agrostis Tenuis*)

This grass imported from New Zealand is identical with Rhode Island Bent. Leaf-blades very narrow and flat; dark green; slightly creeping habit and makes a fine turf for Putting Greens. It succeeds on all well drained soils and will thrive on acid soils. Price, lb. \$1.25; 10 lbs. \$12.00; 25 lbs. \$28.75; 100 lbs. \$100.00.

BENT, CREEPING

(*Agrostis Species or South German Mixed Bent*)

The distinctive feature of this species is its compact, creeping, rooting stems. The stoloniferous roots form a strong, enduring turf which withstands hard usage. Does well on all soils, particularly on light, moist land. Price, lb. \$1.50; 10 lbs. \$14.00; 25 lbs. \$32.50; 100 lbs. \$125.00.

BENT, RHODE ISLAND

(*Agrostis Tenuis*)

Thrives well on acid soils. Rhode Island Bent produces only short stolons or runners; makes a very fine dark green turf. Price, lb. \$1.25; 10 lbs. \$12.00; 25 lbs. \$28.75; 100 lbs. \$100.00.

BENT, SEASIDE

(*Agrostis Maritima*)

Does well in moist situations, making a rapid growth; blades are almost as narrow as true creeping bent. It is a vigorous stoloniferous creeper and the only bent that compares favorably with Creeping or Velvet Bents. Price, lb. \$1.25; 10 lbs. \$12.00; 25 lbs. \$28.75; 100 lbs. \$95.00.

BERMUDA GRASS

(*Cynodon Dactylon*)

A most valuable grass for the Southern course. It is of dwarf habit with long creeping stems, rooting at the joint and covering the ground with a matting of fine turf. It grows on all types of soils but shows a preference for clay and clay loams. Price, lb. 55c.; 10 lbs. \$5.00; 25 lbs. \$12.00; 100 lbs. \$40.00.

BLUE GRASS, CANADA

(*Poa Compressa*)

A very hardy perennial grass with creeping root-stocks. It grows on the poorest and driest soils—sandy, gravelly, or clayey, standing severe wetness or drought. Price, lb. 50c.; 10 lbs. \$4.50; 25 lbs. \$10.00; 100 lbs. \$35.00.

BLUE GRASS, KENTUCKY

(*Poa Pratensis*)

It is a true perennial, lasting indefinitely and improving every year. Kentucky Blue Grass has creeping underground stems; leaf blades very narrow; color a deep vivid green. It succeeds well on all good soils, especially where lime is used. Price, lb. 50c.; 10 lbs. \$4.50; 25 lbs. \$10.00; 100 lbs. \$35.00.

CRESTED DOG'S TAIL

(*Cynosurus Cristatus*)

Should enter in moderate quantity in pasture and lawn mixtures. Price, lb. 55c.; 10 lbs. \$5.00; 25 lbs. \$11.25.

FESCUE, CHEWING'S NEW ZEALAND

(*Festuca Chewings*)

This variety of Red Fescue imported from New Zealand is now recognized as one of the leading grasses for Putting Greens and Fairways. Makes a fine compact turf of a dark green color. Price, lb. \$1.00; 10 lbs. \$9.00; 25 lbs. \$22.00; 100 lbs. \$80.00.

FESCUE, CREEPING RED

(*Festuca rubra North German grown*)

This is the true creeping variety thriving well on poor soils, and especially adapted for shaded locations. It forms a dense permanent turf. Price, lb. \$1.25; 10 lbs. \$12.00.

FESCUE, FINE LEAVED SHEEP'S

(*Festuca Tenuifolia*)

The leaves of this variety are very fine and dark green. It thrives on very dry soils and in the shade. Price, lb. \$1.25; 10 lbs. \$10.00.

We Pay Transportation Charges on All Grass Seeds by Express or Freight at Our Option.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

Henderson's Superior Recleaned Grasses

FESCUE, HARD

(*Festuca Duriuscula*)

A variety of Sheep's Fescue. Leaves broader, wire-like, not flat. Grows in bunches if sown alone. For the "Rough" where the soil is thin or sandy, it thrives well. Price, lb. 70c.; 10 lbs. \$6.50; 25 lbs. \$15.00; 100 lbs. \$55.00.

FESCUE, MEADOW

(*Festuca Pratensis*)

This grass is also called English Blue Grass and in the South, Randall's Grass; flat and bright green. Grows to a height of 30 inches when left uncut. For wet soils few grasses are equal to Meadow Fescue. Price, lb. 35c.; 10 lbs. \$3.00; 25 lbs. \$6.00; 100 lbs. \$20.00.

FESCUE, RED

(*Festuca Rubra*)

Forms a close and lasting turf of dark green, specially adapted for dry sandy soils. It resists extreme droughts and thrives on inferior soils, gravelly banks and exposed hill-sides, also in the shade. Lime need not be used where this grass is desired.

Price, lb. 70c.; 10 lbs. \$6.50; 25 lbs. \$15.00; 100 lbs. \$55.00.

FESCUE, SHEEP'S

(*Festuca Ovina*)

It is a bunch grass, forming dense tufts 3 to 6 inches in diameter with wire-like leaves 2 to 4 inches long of bluish gray. It is an excellent grass to grow on poor sandy soils.

Price, lb. 70c.; 10 lbs. \$6.50; 25 lbs. \$15.00; 100 lbs. \$55.00.

FESCUE, VARIOUS LEAVED

(*Festuca Heterophylla*)

This grass is a native of Europe; the leaves fine and dark green and the plant is of a tufted habit though slightly creeping. It does best on soils rich in humus. Price, lb. \$1.25; 10 lbs. \$10.00.

FESCUE, TALL MEADOW

(*Festuca Elatior*)

Early, nutritive and productive in pastures on wet or clay soils.

Price, lb. 75c.; 10 lbs. \$7.00.

ORCHARD GRASS

(*Dactylis Glomerata*)

A valuable Grass in mixtures either for pasture or hay. Price, lb. 60c.; 10 lbs. \$4.50; 25 lbs. \$10.00; 100 lbs. \$35.00.

RED TOP FANCY

(*Agrostis Palustris*)

It is a perennial grass with a creeping habit of growth, leaf blades narrow. Red Top is a remarkable grass accommodating itself to a variety of soils and conditions. It grows well on wet land. It is strongly drought-resistant and flourishes on soils so very poor in lime that most other grasses fail. Price, lb. 50c.; 10 lbs. \$4.00; 25 lbs. \$8.75; 100 lbs. \$30.00.

RYE, DOMESTIC

A mixture of Italian and English grown in the United States. Price, lb. 25c.; 10 lbs. \$2.25; 25 lbs. \$4.50; 100 lbs. \$15.00.

RYE GRASS, ITALIAN

(*Lolium Italicum*)

Like Perennial Rye Grass it is a rapid grower and is treated as an annual. It is used largely in the South to sow over the Bermuda sod as soon as it turns brown. Price, lb. 35c.; 10 lbs. \$3.00; 25 lbs. \$6.00; 100 lbs. \$20.00.

RYE GRASS, PACEY'S PERENNIAL

(*Lolium Perenne Pacey's*)

This variety used in a mixture is an excellent "nurse" grass where a quick turf is desired. It produces a verdant growth four or five weeks after sowing. The leaves are narrow, flat and smooth. Price, lb. 35c.; 10 lbs. \$3.00; 25 lbs. \$6.50; 100 lbs. \$22.00.

ROUGH STALKED MEADOW

(*Poa Trivialis*)

A spreading, thickly matting, stoloniferous-rooted species; leaf blades narrow, flat, and dark green in color. Forms a fine turf and adapted for shady situation. Thrives on moist and stiff clay lands. Price, lb. 70c.; 10 lbs. \$6.50; 25 lbs. \$15.00; 100 lbs. \$55.00.

SUDAN GRASS (*Sorghum*)

A valuable forage plant introduced from Egypt, similar in appearance to Johnson Grass but makes a finer hay. Sow 20 lbs. per acre.

Price, lb. 25c.; 10 lbs. \$2.00; 25 lbs. \$4.50; 100 lbs. \$15.00.

SWEET VERNAL, TRUE PERENNIAL

(*Anthoxanthum Odoratum*)

Emits an agreeable odor, which it imparts to the hay. Price, lb. \$1.50.

TALL MEADOW OAT

(*Avena Elatior*)

Of rapid growth, recommended for soiling and hay mixtures.

Price, lb. 60c.; 10 lbs. \$5.00.

TIMOTHY

(*Phleum Pratense*)

The grade we offer is choice, free from weed seeds and of high germinating power.

Price, lb. 25c.; 10 lbs. \$1.75; 25 lbs. \$3.00; 100 lbs. \$10.00.

WOOD MEADOW GRASS

(*Poa Nemoralis*)

This grass is adapted for moist shady places. Price, lb. \$1.50; 10 lbs. \$12.50.

YARROW

(*Achillea Millefolium*)

It is a deep-rooting perennial and withstands drought. Sow alone, or with grass mixtures. Price, lb. \$1.50.

Special Mixtures Scientifically Blended to Suit Your Special Requirements and Soil Conditions

WE PAY TRANSPORTATION CHARGES ON ALL GRASS SEEDS

Clovers

HENDERSON'S
SUPERIOR RECLEANED

SWEDISH CLOVER ALSIKE OR HYBRID

(*Trifolium Hybridum*)

Alsike or Swedish Clover is a hybrid intermediate in growth and appearance between Red and White Clovers. The blossoms are pinkish white. It is a perennial and one of the hardiest of all Clovers, thriving particularly well in cool and cold climates and stands freezing well, but also adapts itself to most climates where Clovers grow, and will grow in moister soil than Red Clover, in fact, has produced splendid crops under irrigation. The plants attain a height of one to two feet; stems and leaves, though smaller than those of Red Clover, are much more numerous, making hay of fine texture.

Alsike frequently produces good crops on soils on which Red Clover will not grow. We strongly advise farmers to add 2 or 3 lbs. per acre to their usual seeding of Red Clover and Timothy. Sow (if alone) 8 lbs. per acre. (See engraving.)

Price, lb. 60c; 10 lbs. \$5.50; 25 lbs. \$12.50; 100 lbs. \$45.00.

CRIMSON OR SCARLET

(*Trifolium Incarnatum*)

Plowing under a good crop of Scarlet Clover is equivalent to 20 tons of stable manure per acre and even if the Clover be harvested or pastured, the benefits derived from the wonderful nitrogenous root formation will alone many times repay the cost of seed and labor.

Crimson Clover cut when coming into bloom makes hay richer in protein than Red Clover, and the yield on average soils is two to three tons per acre. It is especially adapted for green forage and silage and is much relished by dairy stocks. Cut green before flowers mature.

Crimson Clover should not be fed after the flowers mature for the hairs of the calyx are apt to form "hair balls" in the stomachs of animals.

Sow at the rate of 15 pounds of seed per acre, either broadcast or drilled. In the latitude of New York City sow in July.

Price, lb. 35c; 10 lbs. \$3.00; 25 lbs. \$6.00; 100 lbs. \$20.00.

KOREAN LESPEDEZA

An annual leguminous plant considerably grown, particularly in the South, as a summer pasture, green forage and hay crop. Valuable as a soil enricher for green manure. Sow 14 lbs. per acre.

Price, lb. 45c; 10 lbs. \$4.00; 25 lbs. \$8.75; 100 lbs. \$30.00.



MEDIUM RED

(*Trifolium Pratense*)

Common or Medium Clover,

June Clover

Domestic Grown

Red Clover according to locality is a biennial or short-lived perennial. It grows one to two feet in height and usually makes two crops a year, yielding two to three tons of cured hay per acre. Clover hay is very nutritious; all stock fed on it require less grain; chopped and steamed it is a good substitute for green food for poultry during the winter. As pasturage all animals thrive on it, particularly cattle, sheep and pigs, and as a green manuring and soiling crop it is very valuable, adding humus and nitrogen to the soil. In Northern States Red Clover seed is usually sown in the spring; the earlier the better. If grown alone, use 12 to 14 pounds of seed per acre if broadcasted and cover not over half an inch deep.

Price, lb. 60c; 10 lbs. \$5.75; 25 lbs. \$13.75; 100 lbs. \$50.00.

MAMMOTH OR PEA VINE RED

(*Trifolium Pratense perenne*)

Domestic Grown

Perennial. Time of flowering, July. Height, 2 to 3 feet.

Quite distinct from the common Red Clover, being of larger and coarser growth and valuable for purposes for which the latter is entirely unsuited. It lasts longer and is two or three weeks later than common Red Clover. Of very robust growth, yielding enormous bulk valuable for reclaiming exhausted lands. Sow (if alone) about 12 lbs. per acre. Henderson's Superior Sample (extra recleaned).

Price, lb. 65c; 10 lbs. \$6.25; 25 lbs. \$15.00; 100 lbs. \$55.00.

DUTCH OR HONEYSUCKLE WHITE

(*Trifolium repens*)

Perennial. Time of flowering May to Sept. Height 6 in. (creeping).

White Clover is a valuable addition to mixtures for permanent pastures, as it furnishes considerable plant food to the other Grasses composing such mixtures.

Sow (if alone) 8 lbs. per acre.

Price, lb. 75c; 10 lbs. \$7.00; 25 lbs. \$16.25; 100 lbs. \$60.00.

WHITE BOKHARA

(Sweet Clover)

(*Melilotus alba*)

Biennial. Time of flowering, June to September. Height, 3 to 5 feet.

A perennial leguminous plant of tall, shrub-like growth, occasionally grown as a forage plant, and often for bees; the numerous small white flowers possess a sweet, honey-like fragrance. The importance of Bokhara Clover, however, is its value for plowing under for green manuring, particularly to prepare poor soils where it is difficult to get other crops to grow. Sow 10 lbs. per acre.

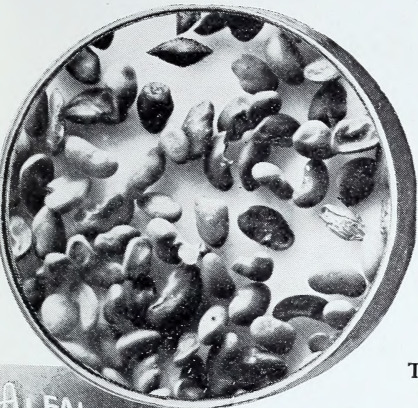
Price, lb. 35c; 10 lbs. \$3.00; 25 lbs. \$7.00; 100 lbs. \$25.00.

WILD WHITE

A dwarf-growing clover which should be added to pasture, helps the grasses by adding nitrogen to the soil, thrives on all soils and is relished by cattle.

Price, lb. \$2.50; 10 lbs. \$22.50.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE



Alfalfa

Henderson's Recleaned

Domestic Grown

GRIMM

The Hardest Alfalfa Known



The attention of the Minnesota experiment station was called to this Alfalfa in 1901, and by careful experimentation Grimm Alfalfa was found to be far superior to common kinds in withstanding unfavorable winters. This strain of Alfalfa seed not only endures extremely low temperature, but it can be cut with greater safety in the fall, and will bear more abuse in the way of pasturage than any other forage plant. Grimm Alfalfa has larger crowns, and a more spreading root system than the ordinary Alfalfa. One of the characteristics of the Grimm Alfalfa is that some of the plants produce peculiar greenish-yellow flowers. Sow 30 lbs. per acre.

Price, lb. 85c.; 10 lbs., \$7.50; 25 lbs., \$17.50; 100 lbs., \$65.00.

NORTHERN GROWN (*Medicago sativa*)

A clover-like leguminous plant of great importance as a hay and forage crop, nutritious and rich in protein elements. It grows 2 to 5 feet high and sends roots, 5, 10, 20, and sometimes 30 feet into the subsoil. It needs one season to become established, after which it yields enormous crops annually for many years. 3 or 4 cuttings per season, aggregating 4 to 6 tons cured hay per acre, are harvested, according to conditions and locality. It does well on all good, rich soils (except heavy clay), if well drained, or overlying a permeable subsoil; on calcareous soil it thrives especially well. Alfalfa is one of the best cover crops for orchards. Our strain of seed is grown in far Northern regions, where plants have to endure extreme cold and still thrive in those high altitudes. Our experience—and that of our customers—has shown that such seed is undoubtedly the best for the North and Eastern States. Before offering this seed to our customers for sale, it is thoroughly re-cleaned by the most modern seed cleaning machinery. By this process we separate the sound, perfect seeds from all rubbish and light, imperfect seeds. Sow in the Northern States during June, July or August. 30 to 40 lbs. of seed per acre if broadcasted, 25 or to 30 lbs. if drilled. In the South sow in February or September.

Price, lb. 80c.; 10 lbs., \$7.00; 25 lbs., \$16.25; 100 lbs., \$60.00.

TRUE DWARF ESSEX RAPE

Sow in the North From April to End of August and in the South During September and October

Rape is ready for pasturing sheep or cattle within six weeks from time of sowing, and on an average one acre will carry twelve to fifteen sheep six weeks to two months. When on the Rape they should at all times have access to salt; but water is not necessary. There are several varieties of Rape, but care should be taken to procure the DWARF ESSEX, or English, as it is sometimes called, which does not seed the same season as sown, unless in some exceptional cases, as when sown too early and the young plant is touched by frost. In northern States it should be sown from April to end of August for fall pasturing, but as it thrives best in cool weather, it should not be sown in the Southern States until September or October for winter pasture. In the latitude of New York it should be sown in April, or in July or August. Its fattening properties are probably twice as good as those of Clover, and for sheep the feeding value of Rape excels all other plants we know of. To secure the best results, the Rape should be sown in drills. Sow 4 lbs. per acre broadcast, 2 to 3 lbs. per acre in drills.

Price, lb. 30c.; 10 lbs., \$2.50; 25 lbs., \$5.00; 50 lbs., \$8.00; 100 lbs., \$15.00.

VETCH, SAND OR WINTER

(*Vicia villosa*)

The Best Legume for Sandy Soils

Although Sand Vetch succeeds on poor, shady soils, it is, naturally, more vigorous on better land. Under such conditions the plant produces numerous branches 3 to 6 feet long. Sand Vetch is hardy all over the United States, and in most places remains green all winter. The crop may be seeded, either from the middle of August to the middle of September, or in the spring from the middle of April to the middle of May.

Sown in the fall it should be mixed with Mammoth Red Clover or Rye to serve as a support for the vines, thus keeping the forage off the ground.

If sown in the spring it may be mixed with Oats or Barley. Fall sown crops furnish some forage before winter comes, and as growth starts very early in the spring it can be pastured, cut for hay, or turned under to renovate the soil.

The foremost orchardists highly recommend Sand Vetch as a cover crop. Soluble plant food in porous soils leaches away in considerable amounts during the late fall and early spring, when the roots of trees are not actively foraging for it.

Sow 50 lbs. per acre, with one-half bushel of Rye or Wheat.

Price, lb., 35c.; 10 lbs., \$3.00; 50 lbs., \$12.00; 100 lbs., \$20.00.

PURCHASER PAYS TRANSPORTATION CHARGES ON FARM SEEDS



Winter Seed Wheat

"PENN 44" (Bearded)

It is a reliable yielder, year after year. In years when all conditions are against successful crops, this variety makes good average yields in spite of adverse conditions.

The grain is of the finest quality, a genuine Longberry, dark red and hard and even on poor soils the grain will be of full size. There is no wheat grown that is better liked by millers.

Its extreme hardiness will carry it safely through severe winters and its vigorous constitution withstands attacks of insect pests and diseases. Sow 1½ bushels per acre.

Price, quart, 25c.; peck, 90c.; bushel of 60 lbs., \$2.75.

FORWARD (Beardless)

It succeeds and produces heavy crops on poor, thin land, and it also has extreme hardiness to recommend it. The gold-colored straw is very thick and strong, easily supporting the heavy grain without breaking. The large amber kernels are placed four to a breast, eight breasts to a side, with long symmetrical heads having a brown chaff. Sow 1½ bushels per acre.

Price, quart, 25c.; peck, 90c.; bushel of 60 lbs., \$2.75.

LEAP'S PROLIFIC (Beardless)

It roots deeply and stools vigorously. It ripens early, with grain and straw maturing at the same time. The heads are beardless, glistening white in color, compactly built, filled with heavy, plump, grains from base to tip, well enclosed, thereby protecting them from unfavorable weather conditions and also preventing self-shelling when cutting.

The grain is large, dark red of the Longberry type. The straw is long, stiff and very uniform, yielding a large tonnage to the acre. 1½ bushels are required to sow an acre. (See engraving.)

Price, quart, 25c.; peck, 90c.; bushel of 60 lbs., \$2.75.



Winter Seed Rye

ROSEN RYE

Rosen Rye has yielded up to 40 bushels to the acre. The plant is extremely vigorous, producing a luxuriant stiff straw from large stools. On account of its vigorous stooling habit only one bushel will be required to sow an acre.

The grain is extremely attractive, plump, and heavy.

One of the principal merits of this valuable grain, is that it thrives equally as well on light soils as it does on heavy soils. (See engraving.)

Price, quart 25c.; peck 80c.; bushel of 56 lbs., \$2.50.

GIANT WINTER RYE

A remarkably heavy cropping Rye, having in fair tests out-yielded many other varieties both in straw and grain. The straw is of uniform length, strong and of extraordinary stiffness.

Price, quart 25c.; peck 80c.; bushel of 56 lbs., \$2.50.

WINTER RYE

The variety most commonly cultivated, whether sown for grain, straw or cutting green.

Price, quart 25c.; peck 80c.; bushel of 56 lbs., \$2.50.

PURCHASER PAYS TRANSPORTATION CHARGES.

Rosen Rye

